
Blow-up for a mixed fractional Nonlinear Schrödinger Equation

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In this work, we are concerned with the blow-up result for a mixed fractional Nonlinear Schrödinger equation (fNLS) with focusing power-type nonlinearity. For the fNLS, Boulenger–Himmelsbach–Lenzmann (Boulenger et al., 2016) proved a general criterion for blowup of radial solutions for L^2 -supercritical and L^2 -critical cases. Motivated by their work, we consider the fractional Nonlinear Schrödinger equation with a mixed degree of derivatives and we establish blow-up for block-radial solutions to the equation for L^2 -supercritical case with negative energy by using localized virial estimates.

This is joint work with Ademir Pastor (Unicamp).